

FILE ID SATSSS90

F 12

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(1)	54	DECLARATIONS
(1)	95	CONDITION TABLES
(1)	123	TM SETUP, TM CLEANUP
(1)	189	CONDITION SUBROUTINES - SETUP AND CLEANUP
(1)	259	FORM CONDS
(1)	352	VERIFY
(1)	465	VFY CLEANUP
(1)	520	KERNEL OR EXEC MODE ROUTINE

0000 1 .TITLE SATSSS90 SATS SYST SERV TESTS \$CMKRNL/EXEC (SUCC S.C.)
0000 2 .IDENT 'V04-000'
0000 3
0000 4
0000 5 *****
0000 6 *
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0000 24 *
0000 25 *
0000 26 *****
0000 27 *
0000 28 *
0000 29 **
0000 30 : FACILITY: SYSTST (SATS SYSTEM SERVICE TESTS)
0000 31
0000 32 : ABSTRACT:
0000 33
0000 34 : THIS MODULE CONTAINS SUBROUTINES WHICH, WHEN LINKED
0000 35 : WITH SUCCOMMON.OBJ, FORM TEST MODULE SATSSS90 TO TEST SUCCESSFUL
0000 36 : OPERATION OF THE \$CMKRNL/EXEC SYSTEM SERVICES. EACH SERVICE IS INVOKED
0000 37 : UNDER VARIOUS INPUT CONDITIONS WITH VARYING INPUT PARAMETERS. ONLY
0000 38 : SUCCESSFUL STATUS CODES ARE EXPECTED IN THIS TEST MODULE. CORRECT
0000 39 : OPERATION OF EACH SERVICE FOR EACH OF ITS ISSUANCES IS VERIFIED BY
0000 40 : CHECKING FOR AN \$\$\$ NORMAL STATUS CODE, EXPECTED RETURN ARGUMENTS
0000 41 : AND EXPECTED FUNCTIONALITY PERFORMED.
0000 42
0000 43 : ENVIRONMENT: USER MODE IMAC., NEEDS CMKRNL PRIVILEGE,
0000 44 : DYNAMICALLY ACQUIRES OTHER PRIVILEGES, AS NEEDED.
0000 45
0000 46 : AUTHOR: THOMAS L. CAFARELLA, CREATION DATE: MAY, 1978
0000 47
0000 48 : MODIFIED BY:
0000 49
0000 50 : : VERSION
0000 51 : 01 -
0000 52 :--

0000 54 .SBTTL DECLARATIONS
0000 55 :
0000 56 : INCLUDE FILES:
0000 57 :
0000 58 \$PRVDEF : PRIVILEGE BIT DEFINITIONS
0000 59 \$PHDDEF : PROCESS HEADER OFFSETS
0000 60 \$PSLDEF : MODE SYMBOL DEFINITIONS
0000 61 \$LOGDEF : LOG NAME TABLE DEFINITIONS
0000 62 :
0000 63 : MACROS:
0000 64 :
0000 65 :
0000 66 : EQUATED SYMBOLS:
0000 67 :
0000 68 RLEN = 10 : NO. OF RANDOM LWORDS FOR ARG LIST
0000 69 STRING_MASK = ^M<R2,R3,R4,R5> : REGISTER SAVE MASK FOR CMPC INSTRUCTION
0000 70 :
0000 71 : OWN STORAGE:
0000 72 :
0000000A
0000003C

SATSS90
V04-000

J 12
SATS SYST SERV TESTS SCMKRNL/EXEC (SUCC 16-SEP-1984 01:06:36 VAX/VMS Macro V04-00
DECLARATIONS 5-SEP-1984 04:34:06 [UETPSY.SRC]SATSS90.MAR;1 Page 3 (1)

```
00000000 74 .PSECT RODATA,RD,NOWRT,NOEXE,LONG
 0000 75 TEST_MOD_NAME:: STRING C,<SATSS90> ; TEST MODULE NAME
 0009 76 TEST_MOD_NAME_D: STRING I,<SATSS90> ; TEST MODULE NAME DESCRIPTOR
 0019 77 MSG1_INP_CTL: STRING I,< SSCHM!4ZW: CONDITIONS:>
 0039 78 ; FAO CTL STRING FOR MSG1 IN SUCCOMMON.MAR
 0039 79 MSG3_ERR_CTL:: STRING I,< *SSCHM!4ZW: !AS>
 0051 80 ; FAO CTL STRING FOR MSG3 IN SUCCOMMON.MAR
00000000 0051 81 ARGLST0: .LONG 0 ; ZERO LENGTH ARG LIST
00000002 0055 82 PMODE_LOG: .LONG 2 ; UNIQUE LOGICAL NAME ...
00000000 0059 83 .ADDRESS TESTNUM ; ... FOR EACH TEST CASE
```

00000000	85	.PSECT	RWDATA,RD,WRT,NOEXE,LONG	
00000008 0000	86	PRIVMASK:	.BLKQ 1	: ADDR OF PRIVILEGE MASK (IN PHD)
0000000C 0008	87	ARGLST:	.BLKL 1	: HOLDS CURRENT COND 1 TABLE ENTRY
0000000A 000C	88	ARGLSTR:	.LONG RLEN	: ARG LIST TO CONTAIN ...
00000038 0010	89		.BLKL RLEN	: RANDOM DATA
00000040 0038	90	ARGLSTDESC1:	.BLKL 2	: DESCRIPTOR FOR ARG LIST (BEFORE RTN CALL)
0040	91	ARGLSTDESC2:	STRING 0,4*<RLEN+1>	: DESCR'R FOR ARG LIST (DURING RTN CALL)
00000075 0074	92	RTNMODE:	.BLKB 1	: MODE IN WHICH PRIV MODE RTN GETS CONTROL
0075	93	PMODE_EQL:	STRING 0,1	: EQUIVALENCE NAME STRING

007E 95 .SBTTL CONDITION TABLES
007E 96 :
007E 97 :
007E 98 :
007E 99 :
007E 100 :
007E 101 :
007E 102 :
007E 103 :
00000000 00F9 104 :
00000051' 00FD 105 :
0000000C' 0101 106 :
0105 107 :
0105 108 :
0105 109 :
0105 110 :
0105 111 :
00 0136 112 :
01 0137 113 :
0138 114 :
0138 115 :
0139 116 :
0139 117 :
013A 118 :
013A 119 :
013B 120 :
00000000 121 :
COND 1,NOTARG,<ARGUMENT LIST TYPE>,-
<ARG LIST NOT SPECIFIED>,-
<ARG LIST SPECIFIED WITH 0 ARGS>,-
<ARG LIST SPECIFIED WITH SEVERAL ARGS>,-
.LONG 0 ARG LIST NOT SPECIFIED
.ADDRESS ARGLST0 ; ARG LIST WITH 0 ARGS
.ADDRESS ARGLSTR ; ARG LIST WITH SEVERAL ARGS
COND 2,NOTARG,<PRIVILEGED MODE SERVICE>,-
<\$CMKRNL>,-
<\$CMEXEC>,-
.BYTE PSL\$C_KERNEL ; SCMKRNL SERVICE
.BYTE PSL\$C_EXEC ; SCMEXEC SERVICE
COND 3,NULL
COND 4,NULL
COND 5,NULL
.PSECT SATSSS90,RD,WRT,EXE

0000 123 .SBTTL TM_SETUP, TM_CLEANUP
 0000 124 :++
 0000 125 : FUNCTIONAL DESCRIPTION:
 0000 126 :
 0000 127 : TM SETUP AND TM CLEANUP ARE CALLED TO PERFORM
 0000 128 : REQUIRED HOUSEKEEPING AT THE BEGINNING AND END, RESPECTIVELY, OF
 0000 129 : TEST MODULE EXECUTION.
 0000 130 :
 0000 131 : CALLING SEQUENCE:
 0000 132 :
 0000 133 : BSBW TM_SETUP BSBW TM_CLEANUP
 0000 134 :
 0000 135 : INPUT PARAMETERS:
 0000 136 :
 0000 137 : NONE
 0000 138 :
 0000 139 : IMPLICIT INPUTS:
 0000 140 :
 0000 141 : NONE
 0000 142 :
 0000 143 : OUTPUT PARAMETERS:
 0000 144 :
 0000 145 : NONE
 0000 146 :
 0000 147 : IMPLICIT OUTPUTS:
 0000 148 :
 0000 149 : TM_SETUP: COND TABLE INDEX REGISTERS (R2,3,4,5,6) CLEARED;
 0000 150 : ALL PRIVILEGES ACQUIRED.
 0000 151 :
 0000 152 : COMPLETION CODES:
 0000 153 :
 0000 154 : EFLAG SET TO NON-ZERO IF ERROR ENCOUNTERED.
 0000 155 :
 0000 156 : SIDE EFFECTS:
 0000 157 :
 0000 158 : SS CHECK AND ERR_EXIT MACROS CAUSE PREMATURE EXIT
 0000 159 : (VIA RSB) IF ERROR ENCOUNTERED.
 0000 160 :
 0000 161 :--
 0000 162 :
 0000 163 :
 0000 164 :
 0000 165 : TM_SETUP::
 52 D4 0000 166 CLRL R2 : INITIALIZE
 53 D4 0002 167 CLRL R3 : .. CONDITION
 54 D4 0004 168 CLRL R4 : TABLE
 55 D4 0006 169 CLRL R5 : INDEX
 56 D4 0008 170 CLRL R6 : REGISTERS
 FFF3' 30 000A 171 BSBW MOD_MSG PRINT : PRINT TEST MODULE BEGIN MSG
 03 00 00000000'EF DE 000D 172 MOVAL TEST_MOD_SUCC_TMD_ADDR : ASSUME END MSG WILL SHOW SUCCESS
 00000000'8F F0 0018 173 INSV #SUCCESS,#0,#3,MOD_MSG_CODE ; ADJUST STATUS CODE FOR SUCCESS
 00000000'EF 0020 :
 0025 174 MODE TO_SS_KRNL : KERNEL MODE TO ACCESS PHD
 59 00000000'9F D0 0048 175 MOVL @#CTL\$GL_PHD,R9 : GET PROCESS HEADER ADDRESS
 00000000'EF 69 DE 004F 176 MOVAL PHDSQ_PRIVMASK(R9),PRIVMASK : GET PRIV MASK ADDRESS
 0056 177 MODE FROM,SS ; BACK TO USER MODE
 0057 178 PRIV ADD,ALL : GET ALL PRIVILEGES

		0077	179	SSETPRN S TEST_MOD_NAME_D	: SET PROCESS NAME
		0084	180	SS CHECK NORMAL	: CHECK STATUS CODE RETURNED FROM SETPRN
00000010'EF	FF47 CF	3C	BB 0082	PUSHR #STRING_MASK	: SAVE REGS R2-R5 FOR MOVC3
		28	0084 181	MOVC3 #4*RLEN,TM SETUP,ARGLSTR+4	: GET 'RLEN' LWORDS OF RANDOM DATA
		3C	BA 00BE	POPR #STRING_MASK	: RESTORE REGS R2-R5
			05 00C0	RSB	: RETURN TO MAIN ROUTINE
		FF3C'	30 00C1	TM_CLEANUP:: BSBW MOD_MSG_PRINT	: PRINT TEST MODULE END MSG
			05 00C4	RSB	: RETURN TO MAIN ROUTINE

00C5 189 .SBTTL CONDITION SUBROUTINES - SETUP AND CLEANUP
00C5 190 ++
00C5 191 : FUNCTIONAL DESCRIPTION:
00C5 192 :
00C5 193 : CONDX AND CONDX CLEANUP ARE SUBROUTINES WHICH ARE EXECUTED
00C5 194 : BEFORE AND AFTER THE VERIFY SUBROUTINE, RESPECTIVELY, WHENEVER A NEW
00C5 195 : CONDITION X VALUE IS SELECTED (SEE FUNCTIONAL DESCRIPTION OF SUCCOMMON
00C5 196 : ROUTINE IN SUCCOMMON.MAR). ANY SETUP FUNCTION PARTICULAR TO THE
00C5 197 : CONDITION X TABLE IS INCLUDED IN THE CONDX SUBROUTINE AND CLEANED
00C5 198 : UP, IF NECESSARY, IN THE CONDX CLEANUP SUBROUTINE. THIS INCLUDES,
00C5 199 : ESPECIALLY, CODE TO DETECT CONFLICTS AMONG CURRENT ENTRIES IN TWO
00C5 200 : OR MORE CONDITION TABLES. IF A CONFLICT IS DETECTED, A NON-ZERO
00C5 201 : VALUE IS STORED INTO CONFLICT, WHICH CAUSES THE CALLING ROUTINE
00C5 202 : (SUCCOMMON) TO SKIP THE CURRENT ENTRY IN THE CONDITION X TABLE.
00C5 203 :
00C5 204 : CALLING SEQUENCE:
00C5 205 :
00C5 206 : BSBW CONDX BSBW CONDX-CLEANUP
00C5 207 : WHERE X = 1,2,3,4,5
00C5 208 :
00C5 209 : INPUT PARAMETERS:
00C5 210 :
00C5 211 : CONFLICT = 0
00C5 212 :
00C5 213 : IMPLICIT INPUTS:
00C5 214 :
00C5 215 : R2,3,4,5,6 CONTAIN CURRENT CONDITION TABLE INDEX VALUES
00C5 216 : FOR COND TABLES 1,2,3,4,5, RESPECTIVELY.
00C5 217 :
00C5 218 : OUTPUT PARAMETERS:
00C5 219 :
00C5 220 : CONFLICT SET TO NON-ZERO IF COND TABLE CONFLICT DETECTED.
00C5 221 :
00C5 222 : IMPLICIT OUTPUTS:
00C5 223 :
00C5 224 : R2,3,4,5,6 PRESERVED
00C5 225 :
00C5 226 : COMPLETION CODES:
00C5 227 :
00C5 228 : NONE
00C5 229 :
00C5 230 : SIDE EFFECTS:
00C5 231 :
00C5 232 : NONE
00C5 233 :
00C5 234 :--
00C5 235 :
00C5 236 :
00C5 237 :
00C5 238 : COND1:: :
05 00C5 239 : RSB : RETURN TO MAIN ROUTINE
00C6 240 : COND1_CLEANUP:: :
05 00C6 241 : RSB : RETURN TO MAIN ROUTINE
00C7 242 : COND2:: :
05 00C7 243 : RSB : RETURN TO MAIN ROUTINE
00C8 244 : COND2_CLEANUP:: :
05 00C8 245 : RSB : RETURN TO MAIN ROUTINE

SATSSS90
V04-000

C 13
SATS SYST SERV TESTS \$CMKRNL/EXEC (SUCC 16-SEP-1984 01:06:36 VAX/VMS Macro V04-00
CONDITION SUBROUTINES - SETUP AND CLEANUP 5-SEP-1984 04:34:06 [UETPSY.SRC]SATSSS90.MAR;1 Page 9 (1)

05	00C9	246	COND3::	
		247	RSB	: RETURN TO MAIN ROUTINE
05	00CA	248	COND3_CLEANUP::	
		249	RSB	: RETURN TO MAIN ROUTINE
05	00CB	250	COND4::	
		251	RSB	: RETURN TO MAIN ROUTINE
05	00CC	252	COND4_CLEANUP::	
		253	RSB	: RETURN TO MAIN ROUTINE
05	00CD	254	COND5::	
		255	RSB	: RETURN TO MAIN ROUTINE
05	00CE	256	COND5_CLEANUP::	
		257	RSB	: RETURN TO MAIN ROUTINE

00CF 259 .SBTTL FORM_CONDNS
 00CF 260 ++
 00CF 261 FUNCTIONAL DESCRIPTION:
 00CF 262
 00CF 263 FORM CONDS FORMATS AND PRINTS INFORMATION ABOUT
 00CF 264 THE CURRENT ELEMENT IN EACH OF THE CONDITION TABLES.
 00CF 265
 00CF 266 CALLING SEQUENCE:
 00CF 267
 00CF 268 BSBW FORM_CONDNS
 00CF 269
 00CF 270 INPUT PARAMETERS:
 00CF 271
 00CF 272 NONE
 00CF 273
 00CF 274 IMPLICIT INPUTS:
 00CF 275
 00CF 276 R2,3,4,5,6 CONTAIN CURRENT CONDITION TABLE INDEX VALUES
 00CF 277 FOR COND TABLES 1,2,3,4,5, RESPECTIVELY.
 00CF 278 FOR X = 1,2,3,4,5 :
 00CF 279 CONDX_T - TITLE TEXT FOR CONDX TABLE
 00CF 280 CONDX_TAB - ELEMENT TEXT FOR CONDX TABLE
 00CF 281 CONDX_C - CONTEXT OF THE CONDX TABLE
 00CF 282 CONDX_E - DATA ELEMENTS OF THE CONDX TABLE
 00CF 283
 00CF 284 OUTPUT PARAMETERS:
 00CF 285
 00CF 286 NONE
 00CF 287
 00CF 288 IMPLICIT OUTPUTS:
 00CF 289
 00CF 290 NONE
 00CF 291
 00CF 292 COMPLETION CODES:
 00CF 293
 00CF 294 NCNE
 00CF 295
 00CF 296 SIDE EFFECTS:
 00CF 297
 00CF 298 NONE
 00CF 299
 00CF 300 --
 00CF 301
 00CF 302
 00CF 303
 00CF 304 FORM_CONDNS::
 00CF 305 \$FAO_S MSG1_INP_CTL,FAO_LEN,FAO_DESC,TESTNUM
 00EE 306 ; FORMAT CONDITIONS HEADER MSG
 14 FF0F' 30 00EE 307 BSBW OUTPUT_MSG ; AND PRINT IT
 00 00 91 00F1 308 CMPB #COND1_C,#NULL ; IS CONDITION 1 NULL ?
 03 12 00F4 309 BNEQU 10\$; NO -- CONTINUE
 00BF 31 00F6 310 BRW FORM_CONDNSX ; YES -- SUBROUTINE IS FINISHED
 00CF 309
 00CF 310
 00CF 311 10\$: MOVAL COND1_T,MSG_A ; SAVE ADDRESS OF CONDITION 1 TITLE FOR FAO
 00000000'EF 0000007E'EF DE 00F9 312 MOVL COND1_TAB[R2],MSG_B ; SAVE ADDR OF COND 1 CURR TEXT ELT FOR FAO
 00000000'EF 00000092'EF42 DO 0104 313 MOVB #COND1_C,MSG_CTXT ; SAVE CONDITION 1 CONTEXT FOR FAO
 00000000'EF 0F 90 0110 314 MOV_VAL COND1_C,COND1_E[R2],MSG_DATA1 ; GIVE COND 1 DATA VALUE TO FAO
 0117 315

14 FEE6' 00 03 0096	30 91 12 011F	0117 011A 011D 0122	316 317 318 320	BSBW CMPB BNEQU BRW	WRITE_MSG2 #COND2_C,#NULL 20\$ FORM_COND\$X	; FORMAT AND WRITE CONDITION 1 MSG ; IS CONDITION 2 NULL ? ; NO -- CONTINUE ; YES -- SUBROUTINE IS FINISHED	
				20\$:			
00000000'EF 00000000'EF 00000000'EF	00000105'EF 0000011E'EF43 00	DE 00 90	0122 012D 0139	321 322 323	MOVAL MOVL MOVBL MOV VAL BSBW	COND2_T,MSG_A COND2_TAB[R3],MSG_B #COND2_C,MSG_CONTEXT_ ; SAVE ADDRESS OF CONDITION 2 TITLE FOR FAO ; SAVE ADDR OF COND 2 CURR TEXT ELT FOR FAO ; SAVE CONDITION 2 CONTEXT FOR FAO	
14 FEBD' 14 03 006D	30 91 12 0140	0140 0143 0146 0148	325 326 327 328	324 325 326 327	CMPB BNEQU BRW	#COND3_C,#NULL 30\$ FORM_COND\$X	; GIVE COND 2 DATA VALUE TO FAO ; FORMAT AND WRITE CONDITION 2 MSG ; IS CONDITION 3 NULL ? ; NO -- CONTINUE ; YES -- SUBROUTINE IS FINISHED
				30\$:			
00000000'EF 00000000'EF 00000000'EF	00000138'EF 00000138'EF44 14	DE 00 90	014B 0156 0162	330 331 332	MOVAL MOVL MOVBL MOV VAL BSBW	COND3_T,MSG_A COND3_TAB[R4],MSG_B #COND3_C,MSG_CONTEXT_ ; SAVE ADDRESS OF CONDITION 3 TITLE FOR FAO ; SAVE ADDR OF COND 3 CURR TEXT ELT FOR FAO ; SAVE CONDITION 3 CONTEXT FOR FAO	
14 FE94' 14 47	30 91 13 016F	0169 016C	334 335 336	333 334 335	CMPB BEQLU	#COND4_C,#NULL FORM_COND\$X	; GIVE COND 3 DATA VALUE TO FAO ; FORMAT AND WRITE CONDITION 3 MSG ; IS CONDITION 4 NULL ? ; YES -- SUBROUTINE IS FINISHED
00000000'EF 00000000'EF 00000000'EF	00000139'EF 00000139'EF45 14	DE 00 90	0171 017C 0188	337 338 339	MOVAL MOVL MOVBL MOV VAL BSBW	COND4_T,MSG_A COND4_TAB[R5],MSG_B #COND4_C,MSG_CONTEXT_ ; SAVE ADDRESS OF CONDITION 4 TITLE FOR FAO ; SAVE ADDR OF COND 4 CURR TEXT ELT FOR FAO ; SAVE CONDITION 4 CONTEXT FOR FAO	
14 FE6E' 14 21	30 91 13 018F	018F 0192	341 342 343	340 341 342	CMPB BEQLU	#COND5_C,#NULL FORM_COND\$X	; GIVE COND 4 DATA VALUE TO FAO ; FORMAT AND WRITE CONDITION 4 MSG ; IS CONDITION 5 NULL ? ; YES -- SUBROUTINE IS FINISHED
00000000'EF 00000000'EF 00000000'EF	0000013A'EF 0000013A'EF46 14	DE 00 90	0197 01A2 01AE	344 345 346	MOVAL MOVL MOVBL MOV VAL BSBW	COND5_T,MSG_A COND5_TAB[R6],MSG_B #COND5_C,MSG_CONTEXT_ ; SAVE ADDRESS OF CONDITION 5 TITLE FOR FAO ; SAVE ADDR OF COND 5 CURR TEXT ELT FOR FAO ; SAVE CONDITION 5 CONTEXT FOR FAO	
FE48'	30 0185	01B5	348	347	MOV VAL	COND5_C,COND5_E[R6],MSG_DATA1	; GIVE COND 5 DATA VALUE TO FAO ; FORMAT AND WRITE CONDITION 5 MSG
	0188	01B8	349	FORM_COND\$X:	BSBW	WRITE_MSG2	
	05 01B8	350	RSB				; RETURN TO CALLER

01B9 352 .SBTTL VERIFY
01B9 353 ++
01B9 354 : FUNCTIONAL DESCRIPTION:
01B9 355 :
01B9 356 : VERIFY IS CALLED ONCE FOR EACH COMBINATION OF CONDITION
01B9 357 : TABLE VALUES (AS DETERMINED BY THE INDEX REGISTERS R2,3,4,5,6 FOR
01B9 358 : COND TABLES 1,2,3,4,5, RESPECTIVELY). VERIFY ESTABLISHES THE CONDITIONS
01B9 359 : SPECIFIED BY THE COND TABLES AND ISSUES THE SUBJECT SYSTEM SERVICE
01B9 360 : (\$CMKRL OR \$CMEXEC). THEN, THE SUCCESSFUL OPERATION OF THE SERVICE IS
01B9 361 : VERIFIED BY EXAMINING THE STATUS CODE RETURNED, THE VALUES FOR RETURN ARGS
01B9 362 : AND THE FUNCTIONALITY PERFORMED. THE EXAMINATIONS TAKE THE FORM OF
01B9 363 : COMPARISONS AGAINST EXPECTED VALUES. ANY FAILING COMPARISON CAUSES AN
01B9 364 : ERR EXIT MACRO TO BE EXECUTED (EITHER DIRECTLY, OR INDIRECTLY,
01B9 365 : THROUGH THE SS CHECK MACRO); ERR_EXIT SETS EFLAG TO NON-ZERO,
01B9 366 : PRINTS ERROR MESSAGES AND CAUSES AN IMMEDIATE RSB TO CALLER.
01B9 367 : WHEN ERR EXIT IS EXECUTED, FURTHER CALLS TO VERIFY ARE SUPPRESSED,
01B9 368 : AND, AFTER EXECUTING CLEANUP SUBROUTINES, THE IMAGE EXITS.
01B9 369 :
01B9 370 : CALLING SEQUENCE:
01B9 371 :
01B9 372 : BSBW VERIFY
01B9 373 :
01B9 374 : INPUT PARAMETERS:
01B9 375 :
01B9 376 : NONE
01B9 377 :
01B9 378 : IMPLICIT INPUTS:
01B9 379 :
01B9 380 : R2,3,4,5,6 CONTAIN CURRENT CONDITION TABLE INDEX VALUES
01B9 381 : FOR COND TABLES 1,2,3,4,5, RESPECTIVELY.
01B9 382 : FOR X = 1,2,3,4,5 :
01B9 383 : CONDX_E - ADDRESS OF TABLE OF DATA VALUES FOR CONDX
01B9 384 : TABLE. IF THE CONTEXT OF TABLE X IS A SYSTEM SERVICE
01B9 385 : ARGUMENT, THE ARGUMENT NAME MAY BE USED AS A SYNONYM
01B9 386 : FOR CONDX_E.
01B9 387 :
01B9 388 : OUTPUT PARAMETERS:
01B9 389 :
01B9 390 : NONE
01B9 391 :
01B9 392 : IMPLICIT OUTPUTS:
01B9 393 :
01B9 394 : VERIFY HAS NO OUTPUT. SINCE ITS PURPOSE IS TO TEST FOR ERRORS,
01B9 395 : IT MERELY RETURNS TO CALLER NORMALLY AFTER THE TESTS, PROVIDING
01B9 396 : ALL WERE SUCCESSFUL; IF AN ERROR IS DISCOVERED, RETURN IS VIA
01B9 397 : AN ERR_EXIT OR SS_CHECK MACRO, BOTH OF WHICH DOCUMENT DETECTED
01B9 398 : ERRORS.
01B9 399 :
01B9 400 : COMPLETION CODES:
01B9 401 :
01B9 402 : EFLAG SET TO NON-ZERO IF ERROR ENCOUNTERED.
01B9 403 :
01B9 404 : SIDE EFFECTS:
01B9 405 :
01B9 406 : SS_CHECK AND ERR_EXIT MACROS CAUSE PREMATURE EXIT
01B9 407 : (VIA RSB) IF ERROR ENCOUNTERED.
01B9 408 :

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        01B9 409 ;--  

        01B9 410  

        01B9 411  

        01B9 412  

        01B9 413 VERIFY::  

00000000'EF 95 01B9 414 TSTB CFLAG : SHOULD CONDITIONS BE PRINTED ?  

03 13 01BF 415 BEQL 5$ : NO -- CONTINUE  

FF0B 30 01C1 416 BSBW FORM_CONDS : YES -- FMT & PRINT ALL CONDS FOR THIS T.C.  

00000008'EF 000000F9'EF42 DO 01C4 417 5$: MOVL COND1_E[R2],ARGLST : GET CURRENT ENTRY OUT OF TABLE  

00000074'EF 00000000'EF 90 01D0 418 MOVBL ONES,RTNMODE : INIT MODE FOR EACH TST CASE  

00000010'EF 00000000'EF BO 01DB 419 MOVW TESTNUM,ARGLSTR+4 : MAKE RANDOM DATA UNIQUE FOR EACH T.C.  

          01E6 420  

          01E6 421 : ***** SYSTEM SERVICE CALL WHICH IS THE SUBJECT OF THIS TEST CASE *****  

          01E6 422 :  

00 00000136'EF43 91 01E6 423 : CMPB COND2_E[R3],#PSLSC_KERNEL ; IS THIS A CMKRL REQUEST ?  

15 13 01EE 424 BEQLU 10$ : YES -- GO DO IT  

          01F0 425 $CMEXEC_S PRIVMODERTN,@ARGLST : ISSUE CMEXEC REQUEST  

          13 11 0203 426 BRB 15$ : ... AND GO CHECK RESULTS  

          0205 427  

          0205 428 10$:  

          0218 429 15$: $CMKRNL_S PRIVMODERTN,@ARGLST : ISSUE KERNEL REQUEST  

57 00000000'EF DO 0218 430  

57 00000000'EF BO 021F 431 MOVL ONES,R7 : PREPARE FOR R0 COMPARISON  

57 50 D1 0226 432 MOVW TESTNUM,R7  

          73 13 0229 433 CMPL R0,R7 : DID PRIV MODE RTN RETURN EXPECTED STATUS ?  

00000000'EF 57 DO 0228 434 BEQLU 20$ : YES -- CONTINUE  

00000000'EF 50 DO 0232 435 MOVL R7,EXPV : NO -- LOAD EXPECTED AND ...  

          0239 436 MOVBL R0,RECV : RETURNED VALUES, THEN EXIT  

          0239 437 ERR_EXIT LONG,<INCORRECT USER-GENERATED STATUS CODE>, -  

          0239 438 < RETURNED FROM PRIV MODE RTN>  

          029E 439 20$:  

00000136'EF43 00000074'EF 91 029E 440 CMPB RTNMODE,COND2_E[R3] : DID PRIV MODE RTN REALLY GET EXP MODE ?  

74 13 02AA 441 BEQLU 30$ : YES -- CONTINUE  

00000000'EF 00000136'EF43 90 02AC 442 MOVBL COND2_E[R3],EXPV : NO -- LOAD UP EXPECTED AND  

00000000'EF 00000074'EF 90 02B8 443 MOVBL RTNMODE,RECV : RECEIVED VALUES, THEN EXIT  

          02C3 444  

          02C3 445 ERR_EXIT BYTE,<PRIVILEGED MODE SERVICE GAVE USER>, -  

          0320 446 30$: < ROUTINE INCORRECT MODE>  

00000038'EF 00000040'EF DO 0320 447 MOVL ARGLSTDDESC2,ARGLSTDDESC1 : GET LENGTH OF DESCRIPTOR  

0000003C'EF 00000008'EF DO 0328 448 MOVL ARGLST,ARGLSTDDESC1+4 : AND ITS ADDRESS  

          52 D5 0336 449 TSTL R2 : 1ST CONDITION 1 ELEMENT ?  

          0B 12 0338 450 BNEQ 40$ : NO -- CONTINUE  

0000003C'EF 00000051'EF DE 033A 451 MOVAL ARGLST0,ARGLSTDDESC1+4 : YES -- USE 0 ARG LIST  

          0345 452 40$:  

0000003C'FF 00000038'EF BB 0345 453 PUSHR #STRING_MASK : SAVE REGS R2-R5 FOR CMPC  

          00000044'FF 29 0347 454 CMPC3 ARGLSTDDESC1,@ARGLSTDDESC1+4,@ARGLSTDDESC2+4  

          0352  

          3C BA 0357 455 POPR #STRING_MASK : IS EXPECTED LIST = ACTUAL LIST ?  

          70 13 0359 456 BEQLU VERIFYX : RESTORE REGS R2-R5  

00000000'EF 00000038'EF 7D 0358 457 : YES -- ALL FINISHED  

00000000'EF 00000040'EF 7D 0366 458 MOVQ ARGLSTDDESC1,EXPV : NO -- LOAD UP EXPECTED AND  

          0371 459 MOVQ ARGLSTDDESC2,RECV : ... RECEIVED VALUES, THEN EXIT  

          0371 460 ERR_EXIT DESC,<ARG LIST IN PRIV MODE ROUTINE>, -  

          0371 461 <CONTAINS INCORRECT DATA>  

          03CB 462 VERIFYX:  

          05 03CB 463 RSB : RETURN TO CALLER

```

03CC 465 .SBTTL VFY_CLEANUP
03CC 466 :++
03CC 467 : FUNCTIONAL DESCRIPTION:
03CC 468 :
03CC 469 : VFY CLEANUP EXECUTES SYSTEM SERVICES TO UNDO THE
03CC 470 : EFFECT OF THOSE ISSUED IN THE VERIFY SUBROUTINE. VFY CLEANUP MUST
03CC 471 : ASSUME THAT VERIFY MAY NOT HAVE EXECUTED IN ITS ENTIRETY (IF AN
03CC 472 : ERROR IS FOUND). ALSO, VFY CLEANUP MAY ISSUE SS CHECK OR ERR_EXIT
03CC 473 : ONLY AFTER PERFORMING ALL OF ITS CLEANUP OPERATIONS; THIS IS REQUIRED
03CC 474 : IN THE EVENT THAT VFY CLEANUP IS CALLED DURING ERROR PROCESSING,
03CC 475 : WHEN PERFORMING THE REQUIRED CLEANUP IS MORE IMPORTANT THAN
03CC 476 : POSSIBLY DISCOVERING A SECOND ERROR.
03CC 477 :
03CC 478 : CALLING SEQUENCE:
03CC 479 :
03CC 480 : BSBW VFY_CLEANUP
03CC 481 :
03CC 482 : INPUT PARAMETERS:
03CC 483 :
03CC 484 : NONE
03CC 485 :
03CC 486 : IMPLICIT INPUTS:
03CC 487 :
03CC 488 : R2,3,4,5,6 CONTAIN CURRENT CONDITION TABLE INDEX VALUES
03CC 489 : FOR COND TABLES 1,2,3,4,5, RESPECTIVELY.
03CC 490 : FOR X = 1,2,3,4,5 :
03CC 491 : CONDX_E - ADDRESS OF TABLE OF DATA VALUES FOR CONDX
03CC 492 : TABLE. IF THE CONTEXT OF TABLE X IS A SYSTEM SERVICE
03CC 493 : ARGUMENT, THE ARGUMENT NAME MAY BE USED AS A SYNONYM
03CC 494 : FOR CONDX_E.
03CC 495 :
03CC 496 : OUTPUT PARAMETERS:
03CC 497 :
03CC 498 : NONE
03CC 499 :
03CC 500 : IMPLICIT OUTPUTS:
03CC 501 :
03CC 502 : NONE
03CC 503 :
03CC 504 : COMPLETION CODES:
03CC 505 :
03CC 506 : EFLAG SET TO NON-ZERO IF ERROR ENCOUNTERED.
03CC 507 :
03CC 508 : SIDE EFFECTS:
03CC 509 :
03CC 510 : SS_CHECK AND ERR_EXIT MACROS CAUSE PREMATURE EXIT
03CC 511 : (VIA RSB) IF ERROR ENCOUNTERED.
03CC 512 :
03CC 513 :--
03CC 514 :
03CC 515 :
03CC 516 :
03CC 517 : VFY_CLEANUP::
05 03CC 518 : RSB : RETURN TO CALLER

03CD 520 .SBTTL KERNEL OR EXEC MODE ROUTINE
 03CD 521
 03CD 522 : THIS ROUTINE IS INVOKED IN THE VERIFY SUBROUTINE BY A \$CMKRLN
 03CD 523 : OR \$CMEXEC SYSTEM SERVICE. ITS FUNCTION IS TO ASCERTAIN
 03CD 524 : ITS EXECUTION MODE, STORING ITS VALUE IN RTNMODE;
 03CD 525 : SET A RETURN STATUS VALUE IN R0; AND, STORE THE
 03CD 526 : CONTENTS OF ITS ARGUMENT LIST IN ARGLSTDESC2.
 03CD 527 : ALL THREE OF THESE DATA BASES (RTNMODE, R0,
 03CD 528 : ARGLSTDESC2) WILL BE EXAMINED FOR EXPECTED VALUES
 03CD 529 : IN THE VERIFY SUBROUTINE.
 03CD 530
 03CD 531 PRIVMODERTN:
 OFFC 03CD 532 .WORD ^M<R2,R3,R4,R5,R6,R7,R8,R9,R10,R11>
 03CF 533 :
 03CF 534 : FIND CURRENT EXECUTION MODE BY MAKING A LOG NAME AND TRANSLATING IT.
 03CF 535 :
 03CF 536 \$CRELOG_S TBLFLG=#LOG\$C PROCESS, - ; DEFINE A LOG NAME
 03CF 537 LOGNAM=PMODE_LOG, -
 03CF 538 EQLNAM=PMODE_EQL,
 03E6 539 \$TRNLOG_S LOGNAM=PMODE_LOG, - ; TRAN IT TO RECEIVE MODE
 03E6 540 RSLBUF=PMODE_EQL, -
 03E6 541 ACMODE=RTNMODE
 0405 542 \$DELLOG_S TBLFLG=#LOG\$C PROCESS, - ; NO LONGER NEED IT
 0405 543 LOGNAM=PMODE_LOG
 5C D5 0416 544 TSTL AP : IS THERE AN ARGUMENT LIST ?
 0B 12 0418 545 BNEQ 10\$: YES -- CONTINUE
 00000044'FF 9A 041A 546 MOVZBL #4,R8 : NO -- ESTABLISH LENGTH OF NULL LIST
 58 04 D4 041D 547 CLRL @ARGLSTDESC2+4 : AND SET ZERO ARGUMENT COUNT
 OF 11 0423 548 BRB 20\$: JOIN COMMON CODE
 00000044'FF 0425 549 10\$:
 58 04 6C C5 0425 550 MULL3 (AP),#4,R8 : GET NUMBER OF BYTES IN ARG LIST
 58 04 C0 0429 551 ADDL2 #4,R8 : ... ADD IN LENGTH OF LIST HEADER
 00000044'FF 6C 58 28 042C 552 MOVC3 R8,(AP),@ARGLSTDESC2+4 : SAVE ENTIRE ARG LIST INCL HDR
 00000040'EF 58 D0 0434 553 20\$:
 50 00000000'EF D0 043B 554 MOVL R8,ARGLSTDESC2 : PUT LENGTH IN DESCRIPTOR
 50 00000000'EF 80 0442 555 MOVL ONES,R0 : SAVE RETURN DATA IN R0
 04 0449 556 MOVW TESTNUM,R0 : MAKE IT UNIQUE TO TEST CASE
 04 044A 557 RET : EXIT FROM PRIV MODE RTN
 .END

SSSS	= 0000037B	R	04	EXPV	*****	X	04
SSSCHARS	= 00000035			FAO_DESC	*****	X	04
SSSCHARS1	= 00000007			FAO_LEN	*****	X	04
SSSCHARS2	= 00000007			FORM_CONDS	000000CF	RG	04
SSSCHARS3	= 00000000			FORM_CONDSX	000001B8	R	04
SSSCHARS'	= 00000000			LOGSC_PROCESS	= 00000002		
SSSCHARS5	= 00000000			LONG	= 00000004	G	
SSSCOND_A	= 00000001			MOD_MSG_CODE	*****	X	04
SSSSTRINGS	= 00000001			MOD_MSG_PRINT	*****	X	04
SSSSTRINGS2	= 00000005			MSGT_INP_CTL	00000019	R	02
SST1	= 00000000			MSG3_ERR_CTL	00000039	RG	02
SST2	= 00000004			MSG_A	*****	X	04
ARGLST	00000008	R	03	MSG_B	*****	X	04
ARGLST0	00000051	R	02	MSG_CTXT	*****	X	04
ARGLSTDESC1	00000038	R	03	NOTARG	= 00000000	G	
ARGLSTDESC2	00000040	R	03	NULL	= 00000014	G	
ARGLSTR	0000000C	R	03	ONES	*****	X	04
BYTE	= 00000001	G		OUTPUT_MSG	*****	X	04
CFLAG	*****	X	04	PCV	*****	X	04
CHMRTN	*****	X	04	PHD\$Q_PRIVMSK	= 00000000		
CHM_CONT	*****	X	04	PMODE_EQL	00000075	R	03
COMP_SC	*****	X	04	PMODE_LOG	00000055	R	02
COND_T	000000C5	RG	04	PRIVMASK	00000000	R	03
COND1_C	= 00000000			PRIVMODERTN	000003CD	R	04
COND1_CLEANUP	000000C6	RG	04	PRIV_ARGS	= 00000002		
COND1_E	000000F9	R	03	PROCESS_ERR	*****	X	04
COND1_H	00000091	RG	03	PSL\$C_EXEC	= 00000001		
COND1_T	0000007E	R	03	PSL\$C_KERNEL	= 00000000		
COND1_TAB	00000092	R	03	QUAD	= 00000008	G	
COND2	000000C7	RG	04	RECV	*****	X	04
COND2_C	= 00000000			REST_REGS	*****	X	04
COND2_CLEANUP	000000C8	RG	04	RLEN	= 000000A		
COND2_E	00000136	R	03	RTNMODE	00000074	R	03
COND2_H	0000011D	RG	03	SAVE_REGS	*****	X	04
COND2_T	00000105	R	03	SSS_NORMAL	*****	X	04
COND2_TAB	0000011E	R	03	STRING_MASK	= 0000003C		
COND3	= 000000C9	RG	04	SUCCESS	*****	X	04
COND3_C	= 00000014			SYSSCMEXEC	*****	GX	04
COND3_CLEANUP	000000CA	RG	04	SYSSCMKRLN	*****	GX	04
COND3_H	00000138	RG	03	SYSSCRELOG	*****	GX	04
COND3_T	00000138	R	03	SYSSDELLOG	*****	GX	04
COND3_TAB	00000138	R	03	SYSSFAO	*****	X	04
COND4	000000CB	RG	04	SYSSSETPRN	*****	GX	04
COND4_C	= 00000014			SYSSSETPRV	*****	GX	04
COND4_CLEANUP	000000CC	RG	04	SYS\$TRNLOG	*****	GX	04
COND4_H	00000139	RG	03	TESTNUM	*****	X	02
COND4_T	00000139	R	03	TEST_MOD_NAME	00000000	RG	02
COND4_TAB	00000139	R	03	TEST_MOD_NAME_D	00000009	R	02
COND5	000000CD	RG	04	TEST_MOD_SUCC	*****	X	04
COND5_C	= 00000014			TMD_ADDR	*****	X	04
COND5_CLEANUP	000000CE	RG	04	TM_CLEANUP	000000C1	RG	04
COND5_H	0000013A	RG	03	TM_SETUP	00000000	RG	04
COND5_T	0000013A	R	03	VERIFY	000001B9	RG	04
COND5_TAB	0000013A	R	03	VERIFYX	000003CB	R	04
CTL\$GE_PHD	*****	X	04	VFY_CLEANUP	000003CC	RG	04
DESC	= 00000010	G		WORD	= 00000002	G	
EFLAG	*****	X	04	WRITE_MSG2	*****	X	04

```
+-----+
! Psect synopsis !
+-----+
```

PSECT name	Allocation	PSECT No.	Attributes	CON	ABS	LCL	NOSHR	NOEXE	NORD	NOWRT	NOVEC	BYTE
ABS .	00000000 (0.)	00 (0.)	NOPIC USR	CON	ABS	LCL	NOSHR	NOEXE	NORD	NOWRT	NOVEC	BYTE
\$ABSS	00000000 (0.)	01 (1.)	NOPIC USR	CON	ABS	LCL	NOSHR	EXE	RD	WRT	NOVEC	BYTE
RODATA	0000005D (93.)	02 (2.)	NOPIC USR	CON	REL	LCL	NOSHR	NOEXE	RD	NOWRT	NOVEC	LONG
RWDATA	0000013B (315.)	03 (3.)	NOPIC USR	CON	REL	LCL	NOSHR	NOEXE	RD	WRT	NOVEC	LONG
SATSSS90	0000044A (1098.)	04 (4.)	NOPIC USR	CON	REL	LCL	NOSHR	EXE	RD	WRT	NOVEC	BYTE

```
+-----+
! Performance indicators !
+-----+
```

Phase	Page faults	CPU Time	Elapsed Time
Initialization	30	00:00:00.08	00:00:00.42
Command processing	107	00:00:00.74	00:00:04.97
Pass 1	250	00:00:06.85	00:00:13.17
Symbol table sort	0	00:00:00.51	00:00:00.54
Pass 2	122	00:00:01.82	00:00:02.70
Symbol table output	13	00:00:00.08	00:00:00.08
Psect synopsis output	3	00:00:00.03	00:00:00.03
Cross-reference output	0	00:00:00.00	00:00:00.00
Assembler run totals	527	00:00:10.12	00:00:21.92

The working set limit was 1200 pages.

34758 bytes (68 pages) of virtual memory were used to buffer the intermediate code.

There were 20 pages of symbol table space allocated to hold 360 non-local and 23 local symbols.

558 source lines were read in Pass 1, producing 23 object records in Pass 2.

37 pages of virtual memory were used to define 28 macros.

```
+-----+
! Macro library statistics !
+-----+
```

Macro library name	Macros defined
\$255\$DUA28:[SHRLIB]UETP.MLB;1	8
\$255\$DUA28:[SYS.OBJ]LIB.MLB;1	2
\$255\$DUA28:[SYSLIB]STARLET.MLB;2	15
TOTALS (all libraries)	25

690 GETS were required to define 25 macros.

There were no errors, warnings or information messages.

MACRO/LIS=LISS:SATSSS90/OBJ=OBJ\$S:SATSSS90 MSRC\$S:SATSSS90/UPDATE=(ENH\$S:SATSSS90)+EXECMLS/LIB+SHRLIBS\$S:UETP/LIB

0425 AH-BT13A-SE
VAX/VMS V4.0

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